

## Downloading Elevation Data from Hawaii Statewide GIS Elevation Service

This how-to guide contains step-by-step instructions for downloading elevation data in a variety of formats from the [Hawaii Statewide GIS Elevation Service](#), describes what's included with the data, and how to obtain the associated metadata.

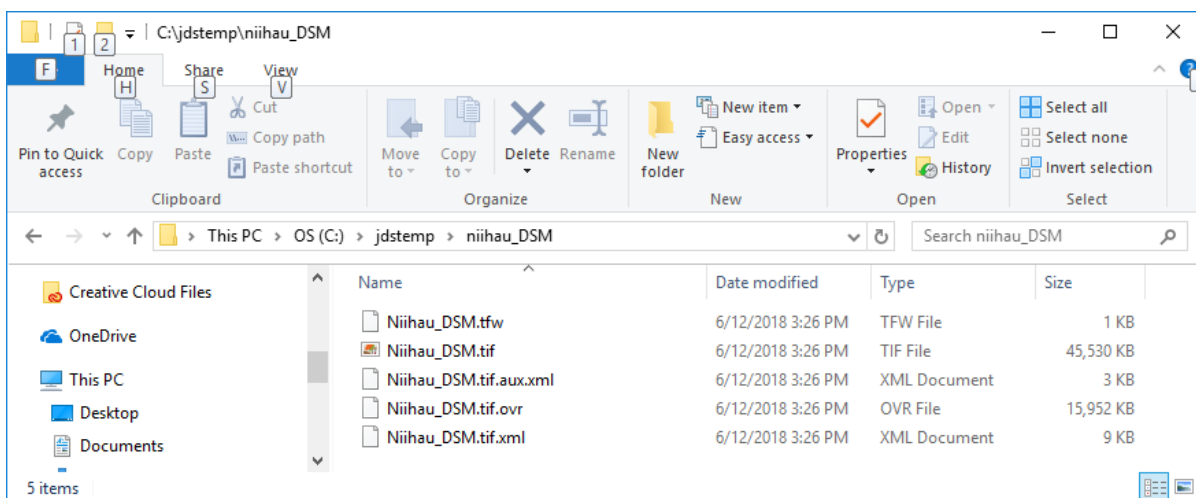
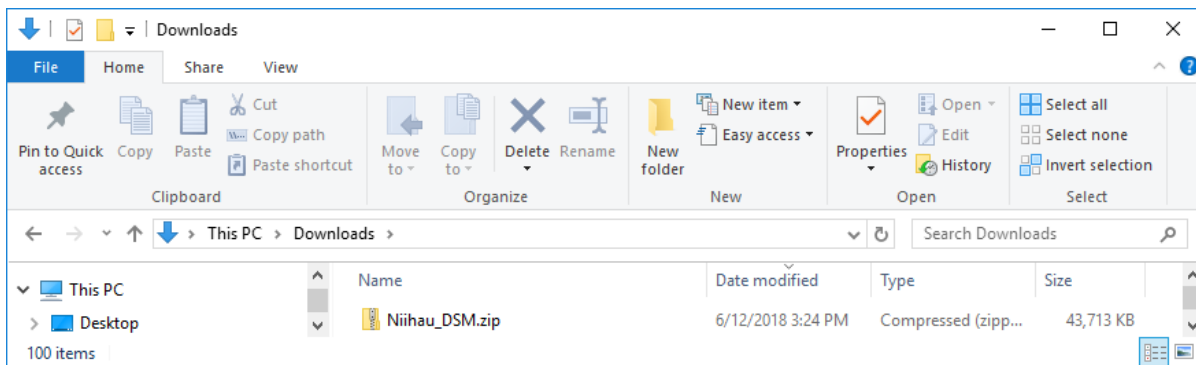
The data included in the Statewide GIS Elevation Service is available in 3 formats – as a raster Digital Terrain Model (DTM), a raster Digital Surface Model (DSM) or as raw, tiled, LAS data files. Each of these files can be quite large, depending on the area selected.

### Downloading the Digital Terrain Models (DTMs) and Digital Surface Models (DSMs):

The DTMs and DSMs are available as island-wide datasets, and their sizes are shown in the table below:

Island	Niihau	Kauai	Oahu	Molokai	Lanai	Maui	Hawaii
DTM	286 MB	2.2 GB	5.6 GB	1.1 GB	1.5 GB	2.1 GB	5.6 GB
DSM	42.7 MB	1.6 GB	4.9 GB	599 MB	1.5 GB	1.7 GB	6.7 GB

They are delivered in zipped tiff file format, and are delivered in the UTM Zone 4, NAD 83 HARN projection and datum.



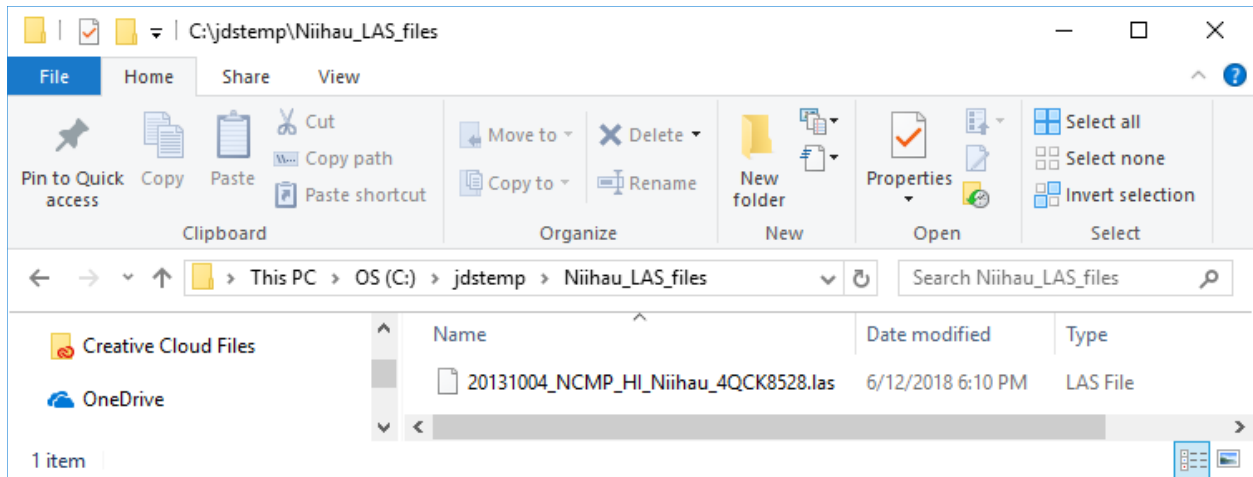
Consult your GIS software documentation for how to use the DSM or DTM once you've downloaded it.

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### Downloading the LAS files:

A LAS file is an industry-standard binary format for storing airborne lidar data. The LAS dataset allows you to examine LAS files, in their native format, quickly and easily, providing detailed statistics and area coverage of the lidar data contained in the LAS files. ([Link to reference](#)).

The LAS files are tiled, and may be as small as 5 or 10 MB, or, more commonly, 100 MB, or even 250 MB or more. These files are not zipped, that is, they are downloaded in raw LAS format.



Consult your GIS software documentation for how to use the LAS file once you've downloaded it.

### Downloading the Metadata:

The metadata for all of the Lidar data in the State of Hawaii GIS Program Elevation Service is contained in one PDF file, found here:

[http://files.hawaii.gov/dbedt/op/gis/AGOL/lidar\\_data\\_collections\\_in\\_hawaii\\_20170920.pdf](http://files.hawaii.gov/dbedt/op/gis/AGOL/lidar_data_collections_in_hawaii_20170920.pdf)

The document contains all readily available information about all known Lidar datasets in Hawaii as of September 20, 2017. The Lidar was collected from 1999-2017, and the metadata included with the data varied from robust to virtually non-existent. Likewise, minimum specifications and QA/QC requirements evolved over the period of data collection, so the quality of the data collected varied. Please keep this in mind as you use the data.

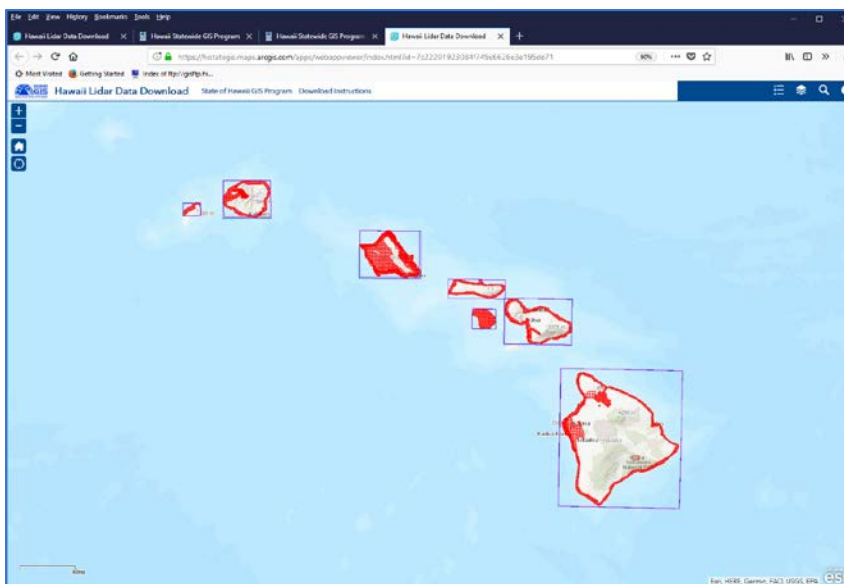
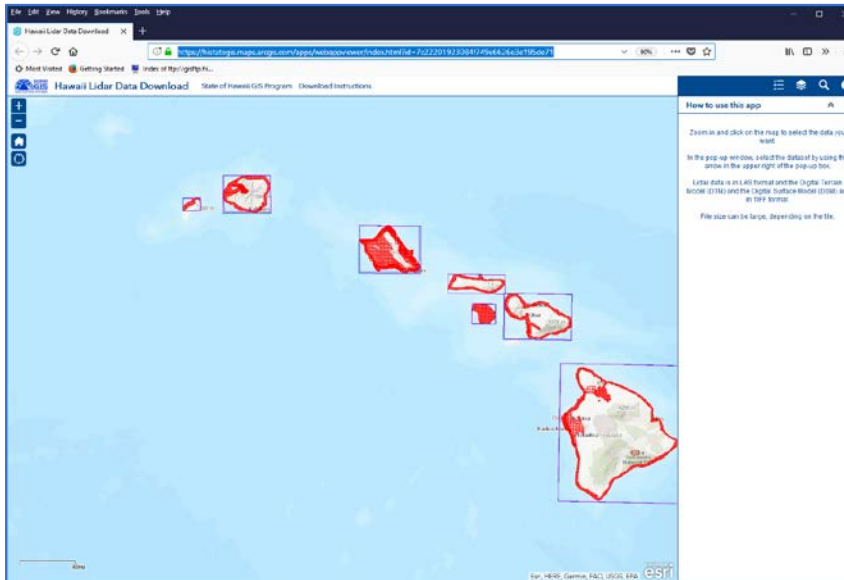
This metadata document is a work in progress. Eventually, the goal is to discover and more fully document these datasets and to include more comprehensive metadata with the metadata downloads. In the meantime, it is recommended that you download the metadata document and refer to it as you use the data.

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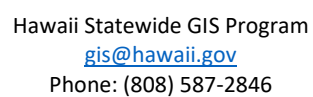
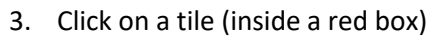
### Using the application:

1. Go to the [Hawaii Statewide GIS Lidar Data Download Application](https://hawaii-statewide-gis-program.maps.arcgis.com/apps/webappviewer/index.html?id=7c2220191823268f749b64c6c4e195de71); click on the Splash Screen if prompted.

*Note: Digital Terrain and Digital Surface Models (DTMs and DSMs) are provided in zipped raster (tiff) format. Raw Lidar data are provided in LAS format. Files can be large, ranging from 10s of MB to several GB, depending on area selected. File sizes are indicated before download begins.*

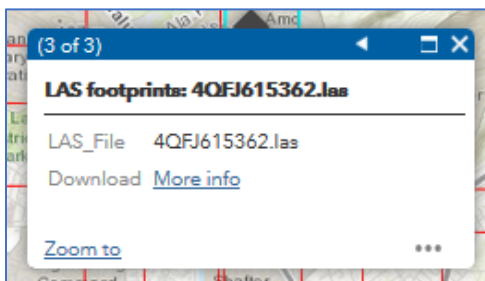
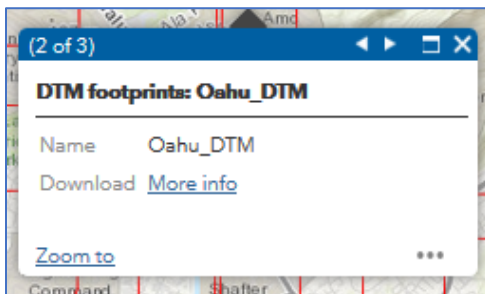
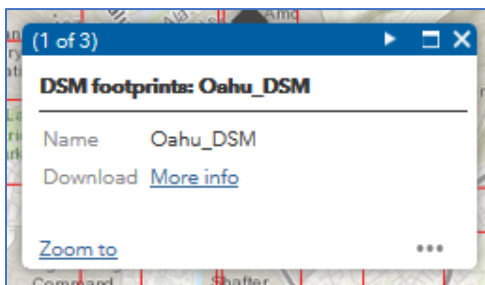
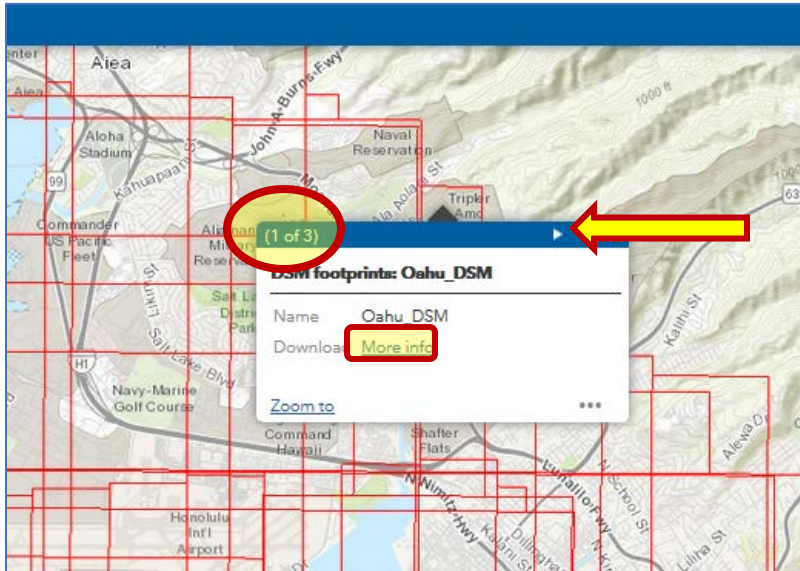


2. Zoom to area of interest using zoom tools or by finding an address or place and click on a tile (inside a red box)



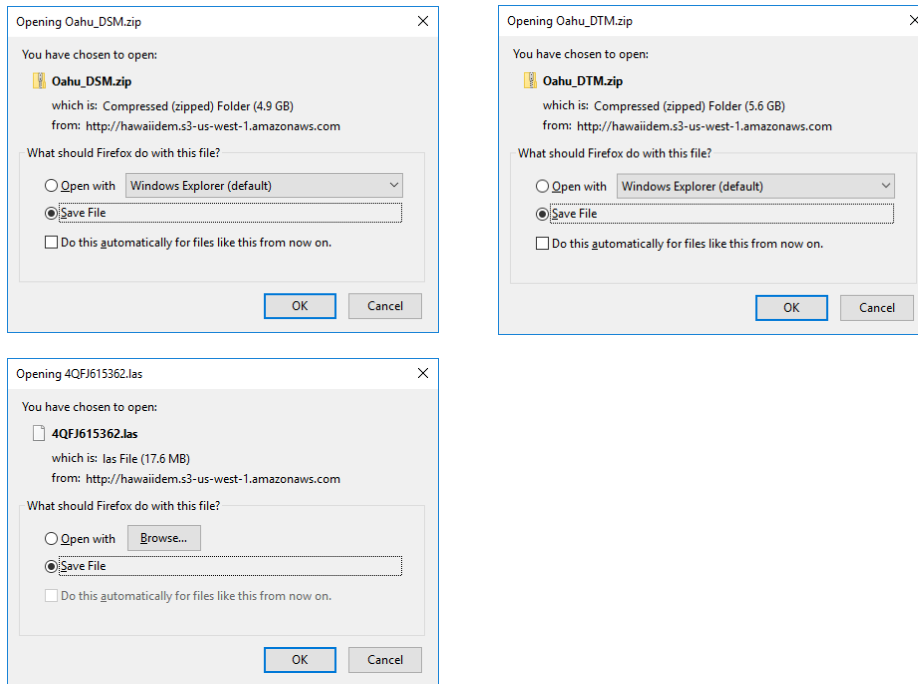
## Downloading Elevation Data from Hawaii Statewide GIS Elevation Service

4. Any tile that you choose will have at least 3 download options (click on arrow to see each file):
  - a. Island-wide DSM
  - b. Island DSM
  - c. At least one LAS file for corresponding tile



## Downloading Elevation Data from Hawaii Statewide GIS Elevation Service

- Click on “More Info” to see file size and to download



- Other areas may be covered by multiple tiles/las datasets – you can download all, or just those of interest:

